

Name: \_\_\_\_\_

### Unit 5 – Cell Growth and Reproduction

1. What are the three reasons that cells typically divide?
  - a.
  - b.
  - c.
2. **Circle one:** The longest phase of the cell cycle is **INTERPHASE / MITOSIS**
3.  $G_1$  is about cells \_\_\_\_\_.
4. How does a duplicated strand of DNA end up being identical to the original strand?
5. The last stage of Interphase is \_\_\_\_\_.
6. In mitosis, the goal is to get cells that are genetically \_\_\_\_\_. That is, we want to go  $2N \rightarrow 2N$ .
7. Match the following Mitosis stages to what happens
  - \_\_\_ Prophase
  - \_\_\_ Metaphase
  - \_\_\_ Anaphase
  - \_\_\_ Telophase
  - a. Chromosomes move to opposite ends of cell
  - b. Nucleus reforms, DNA loosens, last stage
  - c. DNA condenses; nuclear breaks down
  - d. Chromosomes line up in middle of cell
8. What is the difference between plant and animal telophase/cytokinesis?
9. What does meiosis do to the number of chromosomes? \_\_\_\_\_
10. Meiosis goes from  $2N \rightarrow$  \_\_\_\_\_, or from diploid  $\rightarrow$  \_\_\_\_\_
11. What is crossing over?
12. When does crossing over happen? \_\_\_\_\_
13. What is the idea of Independent assortment?
14. When chromosomes fail to separate properly, it is known as \_\_\_\_\_.
  - a. \_\_\_\_\_ syndrome and Patau syndrome are results of nondisjunction.